

**REMARKS**

Claims 1-23, 34-55, 58 and 62-68 were previously canceled. Claims 24-33, 56, 57 and 59-61 are pending.

The Applicants respectfully request that the Examiner reconsider earlier rejections in light of the following amendments and remarks. No new issues are raised nor is further search required as a result of the changes and remarks made herein. Entry of the Amendment is respectfully requested.

**Examiner Interview**

Applicants thank the Examiner for granting and conducting an Interview for this case on July 5, 2011. The amendments made herein to claims 24-33 and 56, 57 and 59-61 are in accordance with the amendments suggested by the Examiner to overcome the outstanding rejections.

**Claims 24, 27-33, 56, 57, 59 and 61 over Renouard and Balcerowski**

In the Office Action, claims 24, 27-33, 56, 57, 59 and 61 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No. 6,161,123 to Renouard et al. ("Renouard") in view of U.S. Patent No. 6,101,545 to Balcerowski et al. ("Balcerowski"). The Applicants respectfully traverse the rejection.

Claims 24, 27-33, 56, 57, 59 and 61 recite, *inter alia*, detection of at least one of a duplicate message and a duplicate segmented message with a transport layer of a hybrid User Datagram Protocol (UDP) connectionless transport protocol while requiring less overhead than is required by Transport Control Protocol (TCP) protocol.

Conventional UDP is a protocol used for wireless communications. Conventional UDP provides for exchange of datagrams without acknowledgements or guaranteed delivery, or message duplication detection. Conventional UDP fails to provide such services at the protocol level to minimize overhead while maximizing the limited bandwidth typically available in wireless communication networks. However, in some applications the limitations associated with conventional UDP provide obstacles. In applications where

associated with conventional UDP provide obstacles. In applications where duplicate message detection is needed, conventional UDP fails to provide the services needed.

The hybrid UDP transport protocol as claimed overcomes the shortcoming associated with conventional UDP, by providing for duplicate message detection. In addition to being able to provide such services that are conventionally provided by TCP using an entire TCP transport stack, the claims provide such services while requiring less overhead than is required by Transport Control Protocol (TCP) protocol. This feature is significant in a wireless communication environment that particularly benefits from low overhead data transport. As discussed in the detail below, Renouard and Balcerowski, either alone or in combination, fail to disclose, teach or suggest a hybrid UDP transport protocol, modified to detect at least one of a **duplicate message** and a **duplicate segmented message**, much less while requiring less overhead than is required by Transport Control Protocol (TCP) protocol, as claimed.

The Office Action relies on Balcerowski to allegedly teach a transport layer modified to detect a duplicate message. (See Office Action, page 2) The claims require not just any transport layer modified to detect a duplicate message, but specifically a hybrid UDP transport protocol, modified to detect at least one of a **duplicate message** and a **duplicate segmented message**. Thus, for Balcerowski to make up for the deficiencies in Renouard, Balcerowski must teach a hybrid UDP transport protocol, modified to detect a **duplicate message**, as required by the claims.

Balcerowski teaches:

The User Datagram Protocol (UDP) protocol employed as the underlying transport protocol provides a fast transfer of datagrams, but delivery is not reliable. UDP does not check for flow control, lost datagrams, duplicate datagrams, out-of-sequence datagrams, etc. (*Emphasis added*, See col. 7, lines 8-12)

Balcerowski teaches that conventional UDP "does not check for ... duplicate datagrams". Balcerowski fails to teach or suggest modifying conventional UDP that "does not check for duplicate datagrams" to make up for

the acknowledged deficiencies associated with conventional UDP. Balcerowski fails to teach or suggest modifying UDP, much less modifying UDP to detect a duplicate message and a duplicate segmented message with a transport layer of the hybrid UDP, much less while requiring less overhead than is required by Transport Control Protocol (TCP) protocol, as recited by claims 24, 27-33, 56, 57, 59 and 61.

Balcerowski further teaches:

The IPS protocol stack is shown in FIG. 8. PSimNet 400 handles the message user level while UDP 404 handles the transport level.

PSimNet is the user level protocol that has been developed to meet the communication needs of the PTSs. It defines the communication protocol to support among other things the following:

- bring a PTS into the specified SSTF training session
- a. extend SSTF simulator control and training features to each PTS
- b. extend instructor controls to each PTS
- c. exchange payload and Space Station systems data
- d. implement checks and controls for lost and duplicated datagrams (*Emphasis added, See col. 7, lines 13-25*)

Thus, Balcerowski teaches the PSimNet user level protocol "checks and controls lost and duplicate datagrams". Detection of a duplicate datagram with a the PSimNet user level protocol is not detection of at least one of a duplicate message and a duplicate segmented message with a transport layer of a hybrid User Datagram Protocol (UDP) connectionless transport protocol, much less while requiring less overhead than is required by Transport Control Protocol (TCP) protocol, as recited by claims 24, 27-33, 56, 57, 59 and 61.

Renouard invention teaches a UDP+ protocol that provides "persistent session" functionality to UDP, with a connection being reestablished to complete a data transfer after a termination. (see Renouard, Abstract) Reestablishing a connection to complete a data transfer at best requires detection of a lost message, not detection of at least one of a duplicate message and a duplicate segmented message, as claimed. Renouard fails to teach or suggest modifying a UDP transport protocol transport layer to detect a duplicate message and a duplicate segmented message, much less while

requiring less overhead than is required by Transport Control Protocol (TCP) protocol, as claimed.

Thus, even if Balcerowski taught the deficiencies in Renouard, which as discussed above he does not, Balcerowski fails to do, modifying Renouard to detect a duplicate message provides no benefit to reestablishing a connection to complete a data transfer. Applicants respectfully point out that the Examiner's proposed modification of Renouard is nonsensical in the context of Renouard's invention.

Even if it were obvious to theoretically modify Renouard with the teachings of Balcerowski (which it is not as discussed above), at best Renouard would use the PSimNet user level protocol that "checks and controls lost and duplicate datagrams". Renouard and Balcerowski, either alone or in combination, fail to disclose, teach, or suggest detection of at least one of a duplicate message and a duplicate segmented message with a transport layer of a hybrid User Datagram Protocol (UDP) connectionless transport protocol while requiring less overhead than is required by Transport Control Protocol (TCP) protocol, as recited by claims 24, 27-33, 56, 57, 59 and 61.

Accordingly, for at least all the above reasons, claims 24, 27-33, 56, 57, 59 and 61 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

**Claims 25, 26 and 60 over Renouard, Balcerowski and Butman**

In the Office Action, claims 25, 26 and 60 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Renouard in view of Balcerowski, and further in view of U.S. Patent No. 6,026,430 to Butman et al. ("Butman"). The Applicants respectfully traverse the rejection.

Claims 25, 26 and 60 all depend from claim 24, and are patentable over the prior art of record for all the reasons that claim 24 is patentable.

Claims 25, 26 and 60 recite, *inter alia*, a method of specifying a server class for a physical messaging network server during a registration of the

physical messaging network server. The Examiner cites Butman at col. 18, line 54-col. 19, line 1 to allegedly teach such features.

Butman teaches:

Referring now to FIG. 20b, a flow diagram depicting the process used by a client side communications server to initialize or update the dynamic group registry 07 is shown. Starting at step 800, a user would give the group to be entered into group registry 07 a name, then, at step 805, indicate whether the access type for this group is to be common or restricted (these terms will be described in more detail below.) Next, at step 810, the client side communications server checks to see whether this group will want base content (identified by subject), in which case at step 815 base content is selected, or adhoc content (identified by source) in which case adhoc content will be selected. As described in more detail below, other types of content are also used in a preferred embodiment--mixed content and nondecoupleable mixed content, as well as system content. (See col. 18, line 54-col. 19, line 1)

Butman at col. 18, line 54-col. 19, line 1, nor anywhere else mentions a server class, much less a method of specifying a server class for a physical messaging network server during a registration of the physical messaging network server, as required by claims 25, 26 and 60.

Claims 25, 26 and 60 recite, *inter alia*, detection of at least one of a duplicate message and a duplicate segmented message with a transport layer of a hybrid User Datagram Protocol (UDP) connectionless transport protocol while requiring less overhead than is required by Transport Control Protocol (TCP) protocol. As discussed above, Renouard and Balcerowski, either alone or in combination, fail to disclose, teach or suggest such features.

A thorough reading of Butman reveals that Butman fails to teach or suggest reliance on UDP, much less a hybrid UDP connectionless transport protocol modified to detect a duplicate message, as claimed.

Renouard, Balcerowski, and Butman, either alone or in combination, fail to disclose, teach, or suggest detection of at least one of a duplicate message and a duplicate segmented message with a transport layer of a hybrid User Datagram Protocol (UDP) connectionless transport protocol while requiring less overhead than is required by Transport Control Protocol (TCP) protocol, as recited by claims 25, 26 and 60.

Accordingly, for at least all the above reasons, claims 25, 26 and 60 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

**Conclusion**

All objections and rejections having been addressed, it is respectfully submitted that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,



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